Better

TOMATO SEED

Season 1929-1930

H. P. LANGDON & SON
Your Tomato Seedsmen
CONSTABLE, N. Y.

One Ounce of Tomato Seed

ONLY a handful—yet it has more than four thousand seeds. Each seed will be a "chip of the old block." The factors of variety, earliness, quality and prolificacy that will make or lose your profit are already determined—now before the seed is even sown.

PLANT THE BEST SEED YOU CAN BUY. IT WILL PAY YOU.

This Tomato Seed

Is grown for you in the way you would grow it for yourself —if you could afford it.

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If you were to select your own tomato seed, how would you do it?

"Well," you'd probably say, "One has to know first just what he wants."

That is true. An Earliana plant with a wonderful crop, but a few days late, is not worth much for seed, is it? Neither is that extra early plant of Bonny Best, if for earliness it has sacrificed in yield and quality.

So you would first consider the season of each variety, and in connection with this, the purpose.

You would have an ideal in your mind in choosing the plant type. It must be prolific, of course, with a high percentage of marketable fruit; vigorous, with neither too much nor too little vine; disease resistant.

All these things and many others you would consider, if you were saving your own seed.

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Can we, your tomato seedsmen, do more than this? We know tomatoes, of course. Our fields can be left until fully ripe before selecting. We have absolutely no Wilt (seed from infected plants will carry the disease). We are located in the extreme north (northeastern New York) where vigor and stamina must be bred into a tomato if it is to mature a crop.

The outstanding advantage, however, is this: When you select an extra good plant, you can't tell whether or not it will transmit those good qualities through its seed. Chances are that it will not. So you would have to plant that seed in a plot by itself next year and prove it out—so far as a single year would prove it. If you select ten hills to a variety and you grow, say, five kinds, you must carry on fifty trial plots, to say nothing of a few trials of new varieties.

For a few ounces of seed this, naturally, wouldn't pay you. But for hundreds of pounds of seed, going to several thousand enthusiastic gardeners, we can do just this.

Line Bred Stock

Briefly, the idea of line breeding is this:

A number of the best plants of a strain are chosen; the seed of each plant kept by itself. When these separate plots are grown the next year there will be a difference between them—each one won't be the same high class stock its parent was. Some of those fine plants will have failed to perpetuate their good qualities. The best plot, therefore, has something the other plots have not; for its good family traits, if we may call them that, are strong. The vigor, the yield and quality of fruit that made the parent plant exceptional have in this case been passed on to the next generation. These traits will probably be transmitted again.

This plot, then, will have proven to some extent its superior value as a breeding stock. The best plants will be selected from it for the trials the next year.

Each year's work in this way, using the finest plants from the best plot of the year before, will gradually bring to the strain a uniformity of type, a vigor, and a degree of productiveness that can be reached by no other method.

Selected Sale Seed

Your seed is grown from the finest stock in the line breeding plots. The young plants are rogued at transplanting for vigor, and in the field for purity of type. In gathering the crop only medium to large smooth fruit are taken for seed. The plant, however, and not the individual fruit is used as the basis of selection. Seed is taken from only those plants high in vigor, yield and quality, as well as in the other desirable characteristics of that variety.

The ripe fruit is ground promptly; the pulp washed out at just the right stage of fermentation. The seed is very carefully dried and thoroughly screened, leaving only plump, vigorous stock. Any seed unsold after eighteen months is discarded—only fresh seed will be sold.

Orders are filled postpaid within twenty-four hours, delivery guaranteed.

ADIRONDACK EARLIANA

(120 days, red)

Germination Tests 88-96%

The Adirondack Strain of Earliana has had twenty-four generations of breeding toward one ideal—extra early fruit of real market quality.

It is extra early; the earliest market variety of which we know. The fruit has given up much of the cussedness of the old type Earliana; it is smooth, quite deep, and firm. Seed cells are small and with thick walls. The color is a good hearty red extending, for an Earliana, remarkably well back toward the stem. The vines, though compact, are vigorous and prolific.

While the Earliana variety has its limitations, as has the extremely early type of any fruit, an improved strain such as this can make you money. Over most of the country the demand is strong—and the price high—for the first home grown tomatoes.

Getting first on the market is partly in knowing how, and then using that knowledge. Start, of course, with seed that will appreciate what you do for it. Read all you can about growing tomatoes. Experiment in a small way with the methods of other folks; perhaps you can adopt some of them to advantage.

The idea that the use of acid phosphate tends to hasten maturity is more than a theory; it is a fact that has been demonstrated over and over. Technical Bulletin No. 28 from New Hampshire gives some interesting results from a number of field tests along this line.

Because the first early plants are well advanced in maturity when set in the field, therefore easily checked, and because the ground is yet cool and with little available nitrogen, the use of nitrate water when setting is of especial benefit to this early crop. Read over the suggestions on page sixteen and try it out next year.

Plan your sowing schedule so that you may have stocky, vigorous plants ready to blossom when setting time comes. And give them room, right from the seed bed. A soft, spindling plant may mature a crop of sorts, but the real tomatoes come on plants which have had a chance to properly develop. This is especially true with extra early varieties.

A Fine Type of Extra Early Fruit
ADIRONDACK EARLIANA

MISSOURI —

Feb. 13, 1929—This makes five consecutive years I have used your Earliana and I do not find anything that beats them for earliness and quality of fruit. I also had splendid luck with your Bonny Best last season.

SOUTH CAROLINA—

Jan. 25, 1929—I have great success with your Earliana tomato.

MAINE —

Jan. 2, 1929—I sowed your Earliana last year and it was the best I have ever obtained, and I raise several thousand boxes each year.

OHIO —

Jan. 26, 1929—Have been using your seed for several years and there is none better.

NORTH CAROLINA—

Dec. 31, 1928—Your Earliana tomato is by all odds the best early variety I have ever tried.

BONNY BEST (*Langdon Strain*)

(126 days, red)

Germination Tests 88-98%

The improvement shown by this strain the past few years has been a source of much satisfaction to us, as well as of profit to our customers.

It has gained in earliness, yet retained its heavy yield. More—it has increased in yield. Several tests alongside other strains have given it first place in earliness, and usually first place in total crop as well. That means something, for Bonny Best has always been early enough for good money and noted as a heavy cropper.

The fruit qualities are fine. It picks uniformly a good packing size, a little larger than Bonny Best used to be. The old tendency toward cracking of the skin has largely been overcome. Smooth, round, well colored, firm—it is in every way an excellent packing tomato.

Unless you are seriously troubled by wilt you can use this strain of Bonny Best for second early with every confidence. It is just naturally the best.

If you have extra early soil give this strain a trial as first early. It will ripen a little behind the Adirondack Earliana, but the heavier yield may more than make up. If you have a piece of ground that is especially fertile, yet early and warm, try a few extra early plants pruned to one stem and staked. Pruning will hasten maturity by several days, on rich soil; you may want to go into it on a larger scale another year. Many growers are finding it profitable.

For canning crop the Bonny Best has been very popular. It is now being challenged by the Marglobe, however, even where wilt resistance need not be considered. The Marglobe, a little later in maturing, may produce a slightly heavier crop. It will require several extra pickings for the same bulk, though, for its ripening is delayed over quite a long picking season.

Marglobe has been advised to replace Bonny Best for greenhouse work. Where wilt is a factor Marglobe, being resistant, probably is better. If wilt is not troublesome Marglobe cannot, in our opinion, compete with this strain of Bonny Best in the greenhouse.

The Best Second Early
BONNY BEST (Langdon Strain)

MASSACHUSETTS—

Jan. 31, 1929—Have used your seed for fifteen years and think it the best I can buy.

LOUISIANA—

Jan. 7, 1929—Last year I grossed $43.15 from a plot six feet wide and seventy-two feet long.

IOWA—

Jan. 19, 1929—For our greenhouse crop we want the very best obtainable at any price, for as you know cost of seed means nothing in comparison to loss of crop. I have been buying your seed for three years and never saw anything to equal it.

MASSACHUSETTS—

Jan. 20, 1929—Really could not buy elsewhere if I wanted to as everyone says, "I want the same kind of tomatoes you sold me last year." Germination last year was great.

NORTH CAROLINA—

Jan. 18, 1929—I have tried your seed in the past, and in all my thirty-five years gardening I have concluded they are superior to anything I have ever grown.

REDHEAD

(126 days, red)

Germination Tests 88%

An interesting development of this variety was shown in the trial plots of 1926. A plot from seed of 1923, of strong germination, had been included for comparison. The plots from later seed were surprisingly better—they were one week earlier; equally vigorous, yet with a more compact, less-sprawling growth; more prolific. It is seldom that such a change can be noted in three years time.

Improvement since then has been more gradual, as with the other varieties; however, Redhead is pretty well up to Bonny Best in value for second early. These two varieties are much alike, any preference is largely a personal one. We like Bonny Best. However, both are immensely popular —and worthy of it.

BAER

(128 days, red)

Germination Tests 96%

A good choice on dry, light soils, as it will set less fruit but mature them larger than Redhead or Bonny Best will do there. It is a thoroughly dependable variety, but a couple of days later in ripening and possibly not quite so productive as Bonny Best on the better soils.

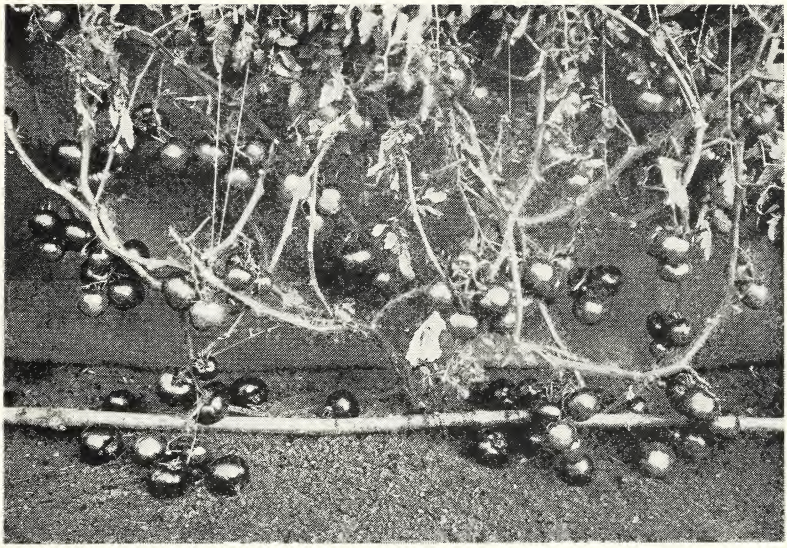
JEWEL, STONE and RED ROCK

(132-135-140 days, red)

These midseason varieties are well known and regularly used by many of our customers. We are very sorry to say that, due to early fall freezes, we could secure only enough of these varieties for our stock planting next year.

For convenience of you who have been using Jewel and Stone, we are buying some of the best stock we can buy, listing it of course at the market price. We believe that, under the circumstances, it is as good as you can get.

Red Rock, however, is another matter. This variety has not had the attention by seedsmen which it deserves; we are doubtful whether we could buy seed on the market which would compete with an improved strain of Marglobe. For this year, therefore, we are offering only Marglobe for late midseason and fall use.



Resistant to Wilt and Nailhead Rust

MARGLOBE

(142 days, red)

Germination Tests 84%

This introduction by Mr. F. J. Pritchard, of the Bureau of Plant Industry at Washington, has attracted much attention from all over the country.

It is a midseason variety of strong, though not excessive, vine growth, and matures a heavy crop. The fruit is distinctly globe shaped and a very attractive red in color. There is no depression at the stem end, no hard rind, and very little tendency toward cracking. It is an excellent shipper; its splendid table quality also commends it.

Marglobe is strongly resistant to Fusarium Wilt and to Nailhead Rust, two of the worst diseases which a tomato grower must combat. In the areas subject to infection they can be controlled only by the planting of resistant varieties. And the welcome given Marglobe—Florida changed over half her planting from Globe to Marglobe in two years time, wilt infected areas everywhere are turning to it more and more—such a welcome labels this as one of the most important introductions yet given the tomato grower.

Price of Langdon's Twenty-four Year Selection and Line Bred

ADIRONDACK EARLIANA

No. 1—Run of the field. ¼ Oz., **25c**; ½ Oz., **40c**; 1 Oz., **60c**; 2 Oz., **$1.20**; 4 Ox., **$2.00**; 8 Oz., **$3.60**; 1 pound, **$6.40.**

No. 2—Double selection, by vine and fruit. ⅛ Oz., **30c**; ¼ Oz., **50c**; ½ Oz., **75c.** Less than one-half pound, **$1.25** per Oz.; ½ pound, **$9.50**; one pound, **$18.00.**

No. 3—Triple selection, by vine, fruit and interior. Our best. ⅛ Oz., **$1.00**; ¼ Oz., **$2.00**; ½ Oz., **$3.00**; 1 Oz., **$5.00**; 4 Oz., **$18.00.** No discount for less than four ounces.

Particular care is given the selection of this No. 3 Earliana. Earliness is of prime importance. Productiveness and vigor are essential. The quality of the fruit must have rigid inspection. After the selection of plant and fruit by outward appearance each fruit is cut individually, by hand, for inspection of the interior construction. A good market tomato will have few seeds and small cells, thick walls, no green or pithy core, will be well colored. Only those fruits showing a high standard of perfection in this, as well as in plant type, are used in the selection of this No. 3 Earliana.

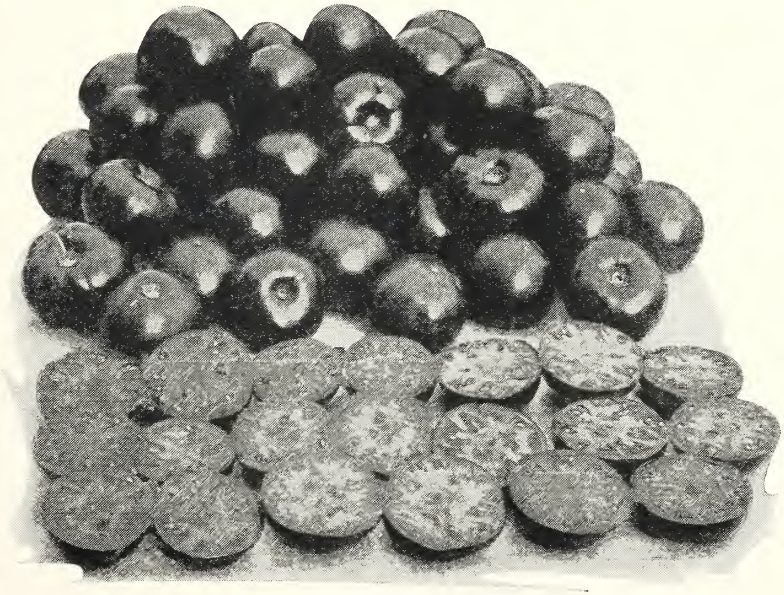
The location at which this seed is grown is worthy of consideration. We are north of the Adirondacks, four miles from the Canadian Line, with a growing season of only about three months and a half free from frost, with generally cool days and many cold nights. This has without doubt been a factor in the improvement of these strains.

OUR WARRANTY

All seed offered by us has been tested and proven to be of good germination. We will replace free of charge any seed which does not germinate under favorable conditions, providing our stock has not been sold out. Naturally, we can go no further than this in guaranteeing your success.

LATER VARIETIES

	¼ oz.	½ oz.	1 oz.	2 oz.	4 oz.	8 oz.
BONNY BEST, Langdon strain (extra selected)	$1.00	$1.50	$2.50	$4.50	$8.00	$14.00
BONNY BEST, Langdon strain (selected)	.50	.75	1.25	2.25	4.00	7.00
REDHEAD (selected)	.50	.75	1.25	2.25	4.00	7.00
BAER (selected)	.50	.75	1.25	2.25	4.00	7.00
MARGLOBE (selected)	.50	.75	1.25	2.25	4.00	7.00
STONE	.20	.30	.50	.90	1.50	2.75
JEWEL	.20	.30	.50	.90	1.50	2.75



All Fruit for No. 3 Seed Is Hand Cut for Inspection
ADIRONDACK EARLIANA

Experiment Station Bulletins on Tomato Growing

"An Economical Fire-heated Hotbed".....Circular No. 65
Agricultural Exper. Station, A & M College, Miss.
"Hotbeds" .....Bulletin No. 45
Extension Service, Conn. Agri. College, Storrs, Conn.
"Coldframes" .....Bulletin No. 46
Extension Service, Conn. Agri. College, Storrs, Conn.
"Early Tomato Growing in New Jersey".....Circular No. 103
Agricultural Exper. Station, New Brunswick, N. J.
"Tomato Diseases" .....Bulletin No. 51
Dominion of Canada, Department of Agriculture, Ottawa, Canada
"Tomato Wilt Investigations".....Technical Bulletin 20
Agricultural Exp. Station, Manhattan, Kan.
"Effect of Phosphorus upon the Yield and Time of Maturity of Tomato".....Technical Bulletin 28
Agricultural Exper. Station, Durham, N. H.
"Growing Tomatoes for the Canning Factory".....Bulletin No. 96
Extension Service, College of Agri., Ithaca, N. Y.
"Tomatoes As a Truck Crop".....Farmers Bulletin No. 1338
Bureau of Plant Industry, Washington, D. C.
"Some Experiments with Tomatoes".....Bulletin No. 218
Agricultural Exper. Station, Lexington, Ky.
"Preparation of Fresh Tomatoes for Market"..Farmers Bulletin No. 1291
Bureau of Plant Industry, Washington, D. C.
"Tomato Leaf Spot, and Experiments with Its Control"..Bulletin No. 177
Agricultural Exper. Station, State College, Pa.
"Tomato Mosaic" .....Bulletin No. 261
Agricultural Exper. Station, Lafayette, Ind.
"Experiments in Spraying and Dusting Tomatoes"....Bulletin No. 230
Agricultural Exper. Station, Blacksburg, Va.
"Tomato Diseases in Florida".....Bulletin No. 185
Agricultural Exper. Station, Gainesville, Fla.
"Tomato Seed Selection".....Bulletin No. 173
Agricultural Exper. Station, Bozeman, Mont.
"Selecting and Saving Tomato Seed".....Bulletin No. 250
Agricultural Exper. Station, Lafayette, Ind.
"Greenhouse Tomatoes".....Farmers Bulletin No. 1431
Bureau of Plant Industry, Washington, D. C.
"The Pennsylvania Forcing Industry".....General Bulletin No. 396
Penn. Dept. of Agriculture, Harrisburg, Pa.
"Economic Results in the Pollination of Greenhouse Tomatoes" .....Bulletin No. 55
Agricultural Exper. Station, Corvallis, Ore.

These up-to-date bulletins, issued free by the stations, cover nearly every phase of tomato growing. Give them a trial on your present problems, and file the list for future reference.

The Visiting Corner

One of the questions about tomatoes most frequently asked by you folks is, "How can I get 'em earlier?" And that question is just as hard to answer as it is important. To say that one should set stocky plants early as possible into warm, fertile soil doesn't go very far.

"Blocking" of the plants in the coldframe is a practice not so generally known and used by growers over the country as it should be. It has many of the advantages of bands or pots, is easier, cheaper, and if properly done has some advantages all its own.

The coldframes are smoothed out to a uniform depth of five inches below the soil level, and then about two and one-half inches of finely composted manure (no fresh manure) leveled carefully over the bed and watered down. This is covered with about the same depth of sandy compost or rich sandy loam.

Plants are transplanted to these beds about a month before time for field setting, giving them four or five inches spacing each way. A spotting board is used for convenience and to insure even spacing and straight rows. Ten days or two weeks before the plants are to go to the field, they are ready to be "Blocked" which consists of cutting down between each row of plants so that every plant stands in its own four or five inch cube of soil and compost. To avoid wilting or shock, the rows are usually cut in one direction and then, in a couple of days, cut the other way. A wide bladed hoe with the shank straightened out makes a convenient tool for this work. After cutting, the beds are well wet down so that the crevice between each block is filled with sand and so that the plants receive no setback.

The first beneficial effect to be noticed is a check in the tendency of plants at this time toward excessive top growth. The plants are making growth, but they are putting it into a new fibrous root system. Every root tipped by blocking immediately branches, so that the block is soon filled with fine roots. When the plants go to the field, each one separates readily from its neighbor, and each has a large undisturbed root system in a solid block of rich compost. These roots, unlike the condition where they have run round and round the inside of a pot, are keenly alive and growing.

Where top pruning is practised, it usually consists of pinching out all side branches, leaving one main stem which is tied at intervals to a stake set close beside each plant. Careful observation will show that a shoot or branch will start from the base of nearly every leaf stalk and later on from the base of the plant; these are pinched out as they appear so that no vitality is wasted through unnecessary growth and subsequent heavy cutting. The fruit clusters appear at short intervals the whole length of the stalk, on the opposite side from the leaf stems and branches, and are readily distinguished.

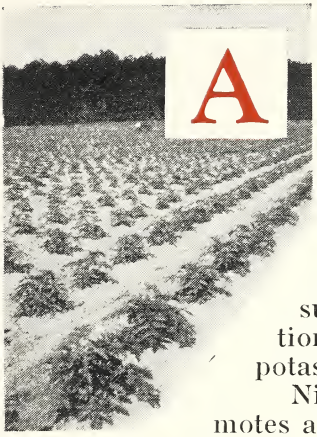
A practice of "leaf pruning" of younger plants is followed by some growers which is in direct contrast to the single stem method. It consists of cutting off the tips of all the leaves, about a week before the plants are set in the field; after which the plants are allowed to grow in the usual manner. Two advantages are claimed. One is that excessive top growth is checked and the stems and leaves hardened by the exposure to light. The other is that the growth of branches is stimulated, with consequent early setting of a large number of fruit clusters.

A third practice is that of pinching out the tip of the plants just before the first buds appear, so that the side branches will start earlier. Advocates of this method claim that, although the crown cluster of fruit is lost, each one of the side branches will bear a cluster just about as early.

These three outlines are given, not as recommendations for general field use, but because most growers like to experiment and see for themselves. The field pruning is an expensive proposition, nevertheless some growers on rich soil make money at it. The second plan especially has the serious possibility of widespread infection of disease. Where no disease is present, however, and where the plants simply wont stand any longer and can't be moved to the field, it is sometimes the best way out. As to pinching out the tip of the plant, it also is liable to spread disease, and we do hate to see that crown cluster lost. However, some growers find it a good idea.

Personally, we are inclined to think that for most conditions, top pruning of any kind isn't so important as generous spacing in the plant beds. With plenty of room right from the start a plant will be short and stocky, well rooted, vigorous enough for an early and a heavy crop.

Fertilization



A CORRECT system of fertilizing has a good deal to do with early maturity, as well as with total yields. Several experiment station tests have seemed to indicate that large amounts of potash are not needed by tomatoes, in fact a decrease in yield and a delay in maturity was often caused by heavy applications. We may assume, then, that ordinary applications of mixed fertilizer rather low in potash will take care of that element.

Nitrogen is the element which promotes a heavy growth of vines. It is very important for a quick, strong growth and a heavy set of fruit. On the other hand, an over supply will result in dense growth of vine at the expense of fruit and will delay maturity. This is not common on soils adapted to early crops, however. We can usually be quite generous with nitrogen to good advantage, except on soil where the growth of vines is naturally strong.

It has been demonstrated that phosphorus does have a definite effect in hastening the maturity of the tomato. This effect seems not so much gained by shortening the period between blossom and ripe fruit as by the promotion of rapid early growth, so that a large number of blossoms and fruit are produced early. Very many soils are low in phosphorus.

In the absence of definite, practical information as regards one's own piece of ground, it is generally considered that 1000 pounds to the acre of 5-10-5 fertilizer should give good results. Less nitrogen may do on some rich soils, especially if much manure is used; more phosphorus in the shape of acid phosphate may prove to be profitable.

Most seed and plant beds have sufficient nitrogen for best results, through the use of composted manure. In fact, fresh manure must be carefully avoided because the nitrogen in it will cause too rapid, soft growth. It does seem, though, that all plant beds should have a reasonable application of acid phosphate. One pound to twenty-five square

feet of bed space should be sufficient. Though not strictly a fertilizer, ground limestone should also be considered here in connection with seed beds. Its regular use improves growing conditions, both in regard to the physical condition of the soil and in control of damping off of seedlings. One pound of ground limestone to eight or ten square feet of bed is a good application.

Nitrate of soda may be used to very good advantage at field setting time. The plants are, of course, thoroughly wet down the evening before taking up. This watering tends to dilute the food supply in both soil and plant tissues, just when food is most needed. An application of dry nitrate at the rate of one pound to seventy-five square feet, scattered evenly over the bed just before watering and while the foliage is dry, is quickly dissolved by the water and taken up by the plant. This gives it a strong reserve of food to carry over the difficult time of transplanting.

Where water is used in field setting, the addition of one pound of nitrate to twenty-five gallons of water used is decidedly good practice. For convenience, the nitrate is first dissolved in hot water at the rate of one pound to the quart; then a quart of this solution is added to every twenty-five gallons used and stirred just a little to insure mixing. Tomatoes thrive on this. If used with other crops, though, test it out on a few plants first. Cauliflower, for instance, find it a little too strong for best results.

A few memoranda: Seed required, one or one and a quarter ounces to the acre. Depth of sowing, ⅜ inch. Cover bed with newspapers. Temperature 70-75 while germinating, 60 while breaking ground, then 65-70 day, 55 night. Water sparingly as plants get older; make roots look for it. Avoid chilling with ice cold water. Spray with Pyrox before setting in the field. Have cutworm bait ready. Set plants deep; cultivate soon. Late cultivations, very shallow.

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Remember, whether it's a report of last year's results, questions, some new idea worked out which you are willing to share, or just to say "hello", a letter from you is always interesting and welcome. We'll be looking forward to it.

Sincerely yours,

November, 1929. H. P. LANGDON & SON.

"Not What it Costs ~
What it Does"